

Full Length Research Paper

The relation of depression and anxiety in academic achievement among group of university students

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This study aims to identify the impact of mood disorders, especially anxiety and depression among a sample of students for their academic achievement in Tafila Technical University. In addition, the study focused on knowing the difference between gender and the level of depression and anxiety they have. It also investigates the difference between colleges and the levels of depression and anxiety. So two measurements have been applied, one measures the level of anxiety and the other measures the level of depression on a random sample of 200 students from different faculties in the university. The results of the study indicate that females are more anxious than males, while males are more depressed than females. Additionally, the results indicate that there is a positive relationship between achievement and anxiety, while a negative relationship is found with depression.

Key words: Depression, anxiety, achievement, college, gender.

INTRODUCTION

The most common psychological problems of adolescence are depression and anxiety (Kashani and Orvaschel, 1988). While depression is less common during childhood, it increases during the onset of adolescence (Beest and Baerveldt, 1999). During adolescence, depression is experienced mostly short and depending on the certain conditions. Adolescents suffering from depression are sad and broken down. They feel loneliness, but can continue doing their daily chores. However, in deeper cases of depression, adolescents show the symptoms of low self-esteem, self-blame, hopelessness, suicide thoughts, anger, and peevishness (Elgard and Arlett, 2002). From the bulk of research, it can be inferred that depression and anxiety may be experienced at the same time. It has been declared that depression and anxiety are accompanied with 12 to 75% of the surveys conducted (Kashani and Orvaschel, 1988).

While entrance to a university or other tertiary education institutions is a joyous time, it can be a stressful life event for some students (Wong et al., 2006). First-year students are particularly at-risk as they face a number of new stressors during the transitional period of starting a new life in university or college (Voelker, 2003). Just as all young adults, undergraduate students need to

cope not only with psychological and psychosocial changes that are connected to the development of an autonomous personal life but also with the academic and social demands that they encounter in university studies in their preparation for professional careers. Therefore, the period of undergraduate education is a sensitive period in an individual's life span, and this period is regarded by many as important for developing systems and intervention methods that may prevent or reduce mental problems (Gjerde, 1993).

Evidence that suggests that university students are vulnerable to mental health problems has generated increased public concern in many societies (Stanley and Manthorpe, 2001). Previous studies suggest high rates of psychological morbidity, especially depression and anxiety, among university students all over the world (Adewuya et al., 2006; Nerdrum et al., 2006; Ovuga et al., 2006; Voelker, 2003). Edwards and Holden (2001) found that among college students seeking counseling services, anxiety and depression were ranked first and third as presenting problems, respectively; academic and work-related concerns were ranked second as the presenting problem. Brackney and Karabenick (1995) noted that high levels of distress, concomitant with limited coping resources, render students less able to meet

Table 1. Participants of the study sample by sex and college.

Gender	Total	Scientific colleges	Humanity colleges
Male	91	53	38
Female	109	50	59
total	200	103	97

academic demands. Unfortunately, college counselors are stretched very thin, thereby providing treatment for anxiety and depression-related complaints. Romano and Hage (2000) suggested the importance of integrative theoretical models that would better allow for the prevention of psychological difficulties. Increasing interest in positive psychology and the factors that constitute wellness fit well with this type of prevention agenda, but comprehensive models describing the psychological resources that protect college students from anxiety and depression are lacking (Dahlin et al., 2005). Psychological distress may result in withdrawal from study as first-year students were found to be twice as likely to drop out as their counterparts in the second and third years (Curtis and Curtis, 1999). Adlaf et al. (2001) found a prominent inverse relationship between year of study and mental health in university students, those at greatest risk being first-year students. Psychological morbidity in undergraduate students represents a neglected public health problem and holds major implications for campus health services and mental policy-making (Poch et al., 2004; Stewart-Brown et al., 2000). In terms of life quality, understanding the impact of this neglected public health phenomenon on one's educational attainment and prospective occupational success is very important.

Related to the increasing number of students, who are dismissed from the university because of the low, cumulative grades, as well as some of them who change their academic fields specialty, the idea of this study emerged, and is going to answer the following questions:

1. Is there any relationship between depression, anxiety and achievement among university students?
2. Is there any significant difference between gender and levels of depression and anxiety?
3. Is there any significant difference between colleges and levels of depression and anxiety of students?

METHODS

Participants

A total of 200 undergraduate students were selected in a randomized cluster sample (109 females and 91 males) attending at Tafia Technical University, participated in this study. Participants were between 18 and 25 years of age. And all Participants are from

different colleges throughout the original study which rates 10% at TTU (Table 1).

Instruments

Translation

All materials used in this study were translated from English to Arabic by a professional translator. Also it has been shown to a specialist for its validity, suitability, and clarity.

Beck depression inventory (BDI)

The BDI is the most commonly used depression inventory in both research and clinical practice. Questions on the 35-item BDI assess various cognitive, physiological, and effect-related symptoms of depression such as sadness, feelings about the future, irritability; loss of pleasure, fatigue, and changes in appetite. For assurance of the measurement tool, the experiment was reported on a pilot sample of 50 male and female students. These were selected from outside the sample. The tool was applied twice on students with a time gap of two weeks. According to the correlation between them, the coefficient alpha for the Beck Depression Inventory was 0.92. Cronbach's alpha for the current study sample was 0.94 (Beck et al., 1988).

Spielberger trait anxiety inventory (TAI)

The TAI was used to measure anxiety in this study. It is a 20-item measure of trait anxiety, defined as the relatively stable tendency of an individual to respond anxiously to a stressful situation. Higher scores indicate a greater degree of trait anxiety. Cronbach's alpha for the current study sample was 0.92 (Spielberger et al., 1984).

RESULTS

Pearson correlation coefficient was used to determine the relationship between depression, anxiety and academic achievement. There is a negative relationship between depression and academic achievement, and a positive relationship between anxiety and academic achievement as is evident in Table 2 the value of Pearson coefficient - 0.499(**), 0.477(**) 0.01 level (2-tailed).

Table 3 indicates that there are differences between males and females on the measurements of anxiety and depression, it was found that the average anxiety among females is higher than among males (3.0547), while the average depression in males higher than females (4.4505).

Table 2. The relationship between depression, anxiety and academic achievement.

	Average	Average depression
Average depression (Pearson correlation)	1	-0.499(**)
Sig. (2-tailed)	-	0.000
N	200	200
Average anxiety (Pearson correlation)	0.477(**)	1
Sig. (2-tailed)	0.000	-
N	200	200

**Correlation is significant at the level of 0.01 (2-tailed).

Table 3. The means and standard deviations of the sample scores on a scale of anxiety and depression.

	Gender	N	Mean	S D
Average anxiety	Male	91	1.5687	0.50753
	Female	109	3.0547	0.62429
	Total	200	2.3786	0.93722
Average depression	Male	91	4.4505	1.01394
	Female	109	1.4037	0.65432
	Total	200	2.7900	1.73521

In addition, ANOVA was used to find out those who are more depressed and anxious between males and females.

Table 4 indicates the existence of differences between genders in terms of anxiety and depression, where the percentage of anxiety among females is higher than males, while the depression is higher among males than females.

Table 5 indicates that the averages of students in scientific and humanitarian colleges are high on the scales of anxiety and depression, but depression of college students is the highest in humanity colleges (3.0309) compared with the science faculties.

ANOVA was used to determine the differences between colleges; it was found that depression in humanity colleges' students was higher than science colleges' students (Table 6).

DISCUSSION

Results of this study indicate that there is a negative relationship between depression and academic achievement of students at the university, and this indicates that the higher the depression among students, the lower their level of achievement. Simonds and Whiffen (2003) support this result. Also, the study indicates that there is a positive relationship between anxiety and academic achievement of students, and this

suggests that whenever the students have a medium level of concern, the higher their academic achievement will be.

This study found differences between gender, depression and anxiety. The females have more anxiety in comparison with the males, while males are more depressed than females. Wong et al. (2006) obtained the same results of the study. They, also, found a significant difference between the mean of depression scores of male and female students. Male students' means of depression scores were significantly higher compared to female students'. Some previous studies, that investigated mental distress among university or college students using other survey methods and rating scales, found higher levels of depression among female students. A Nigerian study, using the Mini International Neuropsychiatric Interview, found depression to be two times more prevalent among male university students (Adewuya et al., 2006).

Another study using the Higher Education Stress Inventory and Major Depression Inventory showed that male students gave higher ratings than females for depression and stress (Dahlin et al., 2005). Studies on samples of Turkish students using the General Health Questionnaire-12 and Beck Depression Inventory instruments found higher depression rates among male students (O'zdemir and Rezaki, 2007). Edwards and Holden (2001) obtained the same results that male students gave higher ratings than females for depression,

Table 4. ANOVA of the sample scores on a scale of anxiety and depression.

		Sum of squares	DF	Mean square	F	Sig.
Average anxiety	Between groups	109.522	1	109.522	332.215	0
	Within groups	65.275	198	0.33		
	Total	174.797	199			
Average depression	Between groups	460.414	1	460.414	656.947	0
	Within groups	138.766	198	0.701		
	Total	599.18	199			

Table 5. The means and standard deviations of the sample scores on a scale of anxiety and depression and college.

	College	N	Mean	S D
Average anxiety	Humanity	97	2.4031	0.96660
	Scientific	103	2.3555	0.91282
	Total	200	2.3786	0.93722
Average depression	Humanity	97	3.0309	1.59069
	Scientific	103	2.5631	1.84002
	Total	200	2.7900	1.73521

Table 6. ANOVA of the sample scores on a scale of anxiety and depression and college.

		Sum of squares	DF	Mean square	F	Sig.
Average anxiety	Between groups	129.354	39	3.317	11.678	0.000
	Within groups	45.443	160	.284		
	Total	174.797	199			
Average depression	Between groups	569.864	39	14.612	79.749	0.000
	Within groups	29.316	160	0.183		
	Total	599.180	199			

but the female students gave higher ratings than males for anxiety. However, there are also studies that found no differences according to gender in terms of depression or depressive mood (Grant et al., 2002). Generally, the transition to adulthood represents a period with high risk for the onset of depression (Reinherz et al., 1999).

In addition, this study found that the students who were studying, educational sciences, arts and administrative and financial, had higher depression and anxiety scores than those whose major areas of study were sciences and engineering, and these results were not due to mediator factors such as age, study year and residency, as explained in the results. Some of the literature found higher scores of depression and anxiety among medical students (Dyrbye et al., 2006). In addition, Özdemir and Rezaki (2007) found that the students who were studying social and political sciences had higher depression, anxiety and stress scores than those in major areas of study such as basic sciences and engineering or medicine. Another study found no difference regarding

depression among medical, graduate and law students (Helmert et al., 1997).

Aktekin et al. (2001) found that the mean of depression scores among medical students was higher than the mean of depression scores among economics and physical education students. Bostanci et al. (2005) found no differences regarding depressive symptoms among students in the education, engineering, arts, sciences and economics departments, although it is difficult to generalize these results because of methodological issues that limit interpretation and the use of different measure instruments.

Conclusion

While the transition to adulthood represents a high-risk period for the onset of depression generally (Eldelekl, 2006), young people who enter tertiary education may face new social and intellectual challenges that may

increase their risk of suffering depression, anxiety and stress (Swift and Wright, 2000). The high rates of depression, anxiety and stress among students have major implications. Not only will psychological morbidity have adverse effects on the student's educational attainment and quality of life, but family life and institutional life may be disrupted (Poyrazli et al., 2002). Prolonged untreated depression, anxiety or stress may impact upon the functioning and productivity of the people who are affected, thus presenting a public health problem (Hawkins, 1995).

The high rates of depression and anxiety among university students have major implications, not only with psychological morbidity that will have adverse effects on students' health, development, educational attainment and quality of life, but also the deteriorating influence on their own families, institutions and even on other people's lives. How long should the mental health of students, especially the alarming minor signs of depression, anxiety and stress, remain as a neglected public health problem in institutes of higher education. College counselors could play an important preventative role by considering anxiety symptoms as a potential warning sign for depression.

In addition, if students have already begun to experience symptoms of depression, the counselor may want to explore whether extended periods of anxiety might have precipitated the depression.

Furthermore, the gender differences reported in previous research could be a result of students' cultural background and the socialization process both genders go through. Therefore, it is important to study international students from different ethnicities to see if gender is related to their experiences of anxiety and depression.

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